

A large, dark silhouette of a streetlight pole and arm, extending from the left side of the page towards the center, with the light fixture pointing towards the right.

Elevated Voltage Testing Metal Streetlights

Report of Findings and Recommendations

February 16,
2011
 **Seattle City Light**



Background

- Thanksgiving 2010 a dog is electrocuted on Queen Anne
- A second dog received a shock the previous day at the same location
- Two more dog-related incidents reported
- City Light calls for an inspection of all its metal streetlight poles and associated metal equipment





Timetable

- Two contractors hired December 20, 2010
- Inspection begins December 27, 2010
- Inspection completed January 16, 2011





Findings

- Number of metal poles tested: **15,743**
- Metal ground cover plates tested: **19,765**
- Other associated equipment tested: **2,011**
- Total equipment tested: **37,519**
- Voltage readings of 30 and above: **56**





Actions Taken

- All poles de-energized immediately
- Replaced or repaired lamp heads, bad wires and faulty ground wires
- Streetlights re-energized when repaired





Causes of Elevated Voltage

- Frayed wires in lamp heads and in poles
- Broken photocells
- Aging infrastructure and aging wires





Costs

- Contractors: **\$344,000**
- City Light crews/repairs: **\$135,000**





Quality Assurance and Internal Controls

- City Light inspects before commissioning streetlight system
- Streetlight standards established
- Condition assessment entered into asset management





Next Steps

- Voltage check as part of routine work
- Horizon plan by 3rd Quarter
 - Grounding assessment and up-grade schedule
 - Streetlight infrastructure replacement schedule



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